



U.S. Department of Energy

Office of River Protection

P.O. Box 450
Richland, Washington 99352

0059513

MAY 15 2003

03-ED-061

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336

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EDMC

Dear Mr. Wilson:

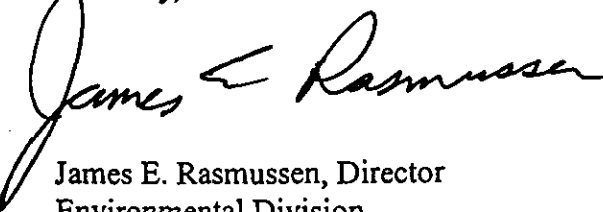
**NOTICE OF INTENT (NOI) TO SUBMIT A PERMIT APPLICATION FOR PROPOSED
CONTACT-HANDLED TRANSURANIC MIXED WASTE PACKAGING AND INTERIM
STORAGE FACILITY**

Attached is the U.S. Department of Energy, Office of River Protection, NOI to file a permit application for a Contact-Handled Transuranic Mixed Waste Packaging and Interim Storage Facility Resource Conservation and Recovery Act Part B Application. Per Washington Administrative Code 173-303-281, this NOI must be filed with the Washington State Department of Ecology no less than 150 days prior to filing the certified Part B Permit Application (Revision 0).

As an on-going activity, we have been meeting with members of your staff on a bi-weekly basis through the Mission Acceleration Initiative for the Supplemental Technologies Project. At our meeting on April 8, 2003, we informed them that we were preparing the NOI for submission. We also agreed to work on our process to expedite preparation, submittal and review of the permit application.

If you have any questions, please contact Richard R. McNulty, Environmental Division, (509) 373-9304, or Robert M. Yasek, Tank Farms Programs and Projects Division, (509) 372-1270.

Sincerely,


James E. Rasmussen, Director
Environmental Division

ED:LAH

Attachment

cc: See page 2

Mr. Michael A. Wilson
03-ED-061

-2-

MAY 15 2003

cc w/o attach:

B. G. Erlandson, BNI
D. I. Allen, CHG
W. T. Dixon, CHG
M. Jarayssi, CHG
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S. L. Dahl, Ecology
N. Ceto, EPA
J. L. Hanson, INNOV
J. B. Hebdon, RL
T. C. McKarns, RL
Administrative Record
Environmental Portal, LMSI

**Attachment
03-ED-061**

**Notice of Intent for Proposed Operation of Contact-Handled
Transuranic Mixed Waste Packaging Subsystems**

**NOTICE OF INTENT FOR PROPOSED CONTACT-
HANDLED TRANSURANIC MIXED WASTE
PACKAGING AND INTERIM STORAGE
FACILITY**

MAY 2003

U.S. Department of Energy
Office of River Protection
Richland, Washington

Prepared by
CH2M HILL Hanford Group, Inc.
Richland, Washington

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ACRONYMS

CH-TRUM	contact-handled transuranic mixed waste
DOE	U.S. Department of Energy
Ecology	State of Washington, Department of Ecology
NOI	notice of intent
ORP	U.S. Department of Energy, Office of River Protection
Part B	dangerous waste permit application
PNNL	Pacific Northwest National Laboratory
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
SEPA	Washington State Environmental Policy Act
TSD	treatment, storage, and/or disposal
WAC	<i>Washington Administrative Code</i>
WIPP	Waste Isolation Pilot Plant

METRIC CONVERSION CHART

From common U.S. units into metric

From metric units into common U.S.

If you know	Multiply by	To get	If you know	Multiply by	To get
Length			Length		
inches	25.40	millimeters	millimeters	0.0393	inches
inches	2.54	centimeters	centimeters	0.393	inches
feet	0.3048	Meters	Meters	3.2808	feet
yards	0.914	Meters	Meters	1.09	yards
miles	1.609	Kilometers	kilometers	0.62	miles
Area			Area		
square inches	6.4516	square centimeters	square centimeters	0.155	square inches
square feet	0.092	square meters	square meters	10.7639	square feet
square yards	0.836	square meters	square meters	1.20	square yards
square miles	2.59	square kilometers	square kilometers	0.39	square miles
acres	0.404	Hectares	Hectares	2.471	acres
Mass (weight)			Mass (weight)		
ounces	28.35	Grams	Grams	0.0352	ounces
pounds	0.453	Kilograms	Kilograms	2.2046	pounds
short ton	0.907	metric ton	metric ton	1.10	short ton
Volume			Volume		
fluid ounces	29.57	Milliliters	Milliliters	0.03	fluid ounces
quarts	0.95	Liters	Liters	1.057	quarts
gallons	3.79	Liters	Liters	0.26	gallons
cubic feet	0.03	cubic meters	cubic meters	35.3147	cubic feet
cubic yards	0.76456	cubic meters	cubic meters	1.308	cubic yards
Temperature			Temperature		
Fahrenheit	subtract 32 then multiply by 5/9ths	Celsius	Celsius	multiply by 9/5ths, then add 32	Fahrenheit
Energy			Energy		
kilowatt hour	3,412	British thermal unit	British thermal unit	0.000293	kilowatt hour
kilowatt	0.948	British thermal unit per second	British thermal unit per second	1.055	kilowatt
Force/Pressure			Force/Pressure		
pounds per square inch	6.895	Kilopascals	kilopascals	0.14504	pounds per square inch

Source: *Engineering Unit Conversions*, M. R. Lindeburg, PE., Second Ed., 1990, Professional Publications, Inc., Belmont, California.

1.0 INTRODUCTION

The first step in obtaining a permit under the State of Washington Department of Ecology (Ecology) *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303-281, calls for dangerous waste facility owners and/or operators to submit a Notice of Intent (NOI). Submittal of a Part A permit application, Form 3, and/or dangerous waste permit application (Part B) for new or expanded dangerous waste treatment, storage, and/or disposal (TSD) units may follow the NOI.

This document serves as notice for the proposed construction and operation on the Hanford Site for a Waste Packaging and Interim Storage Facility (to consist of two identical subsystems) to process and store tank contact-handled transuranic mixed (CH-TRUM) waste. (Transuranic mixed waste means waste containing more than 100 nanocuries of alpha-emitting isotopes per gram of waste, with half-lives greater than 20 years with a hazardous waste component). In addition to these activities, the facility will be used to prepare and certify the CH-TRUM for shipment to the U.S. Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) facility for disposal. This portion of the activity (e.g., visual examination) is a dual use activity which does not require a permit under the WAC, and will not be further described for the purposes of the permit NOI. Each CH-TRUM storage and processing facility will consist of an interim storage area and three tanks plus a dewatering device to meet interim storage requirements (miscellaneous unit) designed in accordance with WAC 173-303.

The proposed construction and operation of the waste packaging and interim storage facility is being pursued in accordance with three sets of criteria: (1) WAC 173-303; (2) the *Resource Conservation and Recovery Act of 1976* (RCRA), as amended, and 40 CFR 260.1 et seq.; and (3) the waste acceptance criteria for disposal at WIPP.

The following identifies the operator of the CH-TRUM waste packaging and interim storage facility and the contact:

Owner/Operator: U.S. Department of Energy,
Office of River Protection
Manager, Office of River Protection: Mr. Roy J. Schepens

Owner: Hanford Site Wide Permit
U.S. Department of Energy
Richland Operations Office
Manager, Keith A. Klein

Contact: Mr. Roy J. Schepens, Manager, Office of River Protection

Address: U.S. Department of Energy,
Office of River Protection
Post Office Box 450
Richland, Washington 99352
Telephone: (509) 376-6677

As is stated in the Hanford Federal Facility Agreement and Consent Order between DOE, Ecology, and the U.S. Environmental Protection Agency (EPA), DOE agrees that RCRA TSD units are subject to the regulatory framework of Chapter 70.105 RCW pursuant to RCRA Section 6001. Agreement, Article I, Paragraph 6. As is also stated in the Tri-Party Agreement, however, "nothing in the Agreement shall be construed to require DOE to take any action pursuant to RCRA which is inconsistent with the requirements of the Atomic Energy Act of 1954, as amended." Agreement, Article I, Paragraph 5. Accordingly, the Owner/Operator submits this NOI only with respect to the materials specifically described herein. The Owner/Operator does not intend the NOI to imply, and therefore hereby reserves the right to deny, that application of Chapter 70.105 RCW to the materials and activities described herein extends to other materials or other activities and further reserves the right to assert the Land Disposal Restriction exemptions of the Land Withdrawal Act as appropriate.

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS

The Hanford Site is a single RCRA facility identified by the EPA/State Identification Number WA7890008967 that consists of 70 TSD units that have or are conducting dangerous waste management activities. These TSD units are included in the Hanford Facility Dangerous Waste Permit (DOE/RL-88-21). The Tank CH-TRUM Waste Packaging and Interim Storage Facility will be included in the Hanford Facility Site Wide RCRA Permit. This is an expansion of the existing permit.

The following sections provide a description of the Tank CH-TRUM Waste Packaging and Interim Storage Facility, support equipment systems, and other general provisions specified in WAC 173-303-281.

2.1 LOCATION OF PROPOSED EXPANSION

Two CH-TRUM Waste Packaging and Interim Storage Subsystems will be constructed. One will be located in the 200 East Area in the 241-B tank farm to support retrieval efforts from the B-200 series tanks. The second will be located in the 200 West Area in the 241-T tank farm to support retrieval efforts from the T-200 series tanks. The subsystems then will be relocated in order to simultaneously package waste from Tank 241-T-111. All sites are located on the Hanford Site, in Benton County, Washington.

Large-scale maps and a general site plan are provided in Appendix A and include the following:

- General overview of the Hanford Site (H-6-958), Figure A-1.
- Site plans showing the 241-B and 241-T tank farm locations, Figures A-2 and A-3.
- Site plans showing the layout of the Tank CH-TRUM Waste Packaging Subsystems at the 200 East and 200 West Areas, Figures A-4, A-5, and A-6. Topographic maps

consistent with the criteria of WAC 173-303-806(4)(a)(xviii) will be provided in the Part B Permit Application.

2.2 DESCRIPTION OF PROPOSED FACILITY

The primary objective for the Tank CH-TRUM Waste Packaging Subsystems is to package, for interim storage prior to shipment to WIPP, CH-TRUM wastes into containers that are compliant for storage. The total layout aerial extent for the CH-TRUM Waste Packaging Subsystem at the 241-B and the 241-T tank farm areas is estimated at approximately 9,600 sq ft, not including the interim storage area for which the size is yet to be determined. As documented by RPP-13300, and RPP-13873, the wastes in the tanks are CH-TRUM containing waste codes as listed in the *Single-Shell Tank System Part A Application*, Revision 6 (DOE/RL-88-21). The total estimated quantity of waste to be processed by these systems is 731,000 gal (2,800 m³). Based on an assumed throughput processing packaging volume of 2,880 gallons per day (11 m³/day), we anticipate this total volume will require approximately 15 to 18 months to process.

The tank waste streams will be retrieved and sent to the associated Waste Packaging Facility (see Figure A-6). A slurry will be developed by adding process water to the CH-TRUM sludge waste, as it is retrieved from the tanks. This slurry will be collected by the waste retrieval system and conveyed to the Waste Packaging Subsystems. The subsystems will route the wastes through a centrifuge or other dewatering device, as required. The dewatered solid stream then will be mixed with absorbent (to be identified) to prevent free liquid formation during transportation. The solid sludge-absorbent mixture will be packaged in either 55-gallon drums or solid waste boxes. Once packaged, the CH-TRUM solid waste will be interim stored in this facility and subsequently moved for shipment, or to another permitted storage facility onsite, for example the 200 Area Central Waste Complex, prior to shipment to WIPP.

Liquid effluent resulting from the separations process initially will be reused for the retrieval and slurry of wastes. After completion of the retrieval efforts, remaining liquid effluent will be characterized and transported via container truck to either the permitted double-shell tank system or the permitted Effluent Treatment Facility.

Secondary containment will be integrated into components of the Tank CH-TRUM Waste Packaging Subsystem. Systems will be constructed to minimize the impacts to human health and the environment and to be consistent with the criteria of WAC 173-303.

The following is a list of major equipment items proposed for each of the two waste packaging subsystems. Note that dimensions, sizing, and/or quantities of the subsystem components will be defined as the system designs mature:

- Full container sealing, decontamination, and survey area with separate load-out storage area prior to transport to storage facility;
- Receiver tanks;

- Dewatering device;
- Processed waste packaging containers;
- Liquid waste holding tank with pumps and filters;
- Air emission control devices;
- Water tanker for removal of excess process water;
- Absorbent dispenser/sorbent materials with mixers for waste/absorbent in containers;
- Empty container holding and preparation area(s);
- Change facility/office space; and
- System control area.

2.3 DESCRIPTION OF NEED FOR FACILITY

The proposed transportable packaging units will be unique to the state of Washington for handling transuranic mixed tank wastes. The proposed units are required to provide a capability to package CH-TRUM waste for interim storage, and in a manner consistent with, and that will meet the requirements for long term disposal of this waste in DOE WIPP deep geological repository in New Mexico. Other facilities on the Hanford Site do not have the capability to process tank waste in the required packaging configuration.

2.4 COMPLIANCE WITH STATE ENVIRONMENTAL POLICY ACT

A *State Environmental Policy Act* checklist will be provided with the submittal of the dangerous waste permit application. In addition, the Tank CH-TRUM Waste Packaging Facility project will comply with the environmental requirements of the *National Environmental Policy Act of 1969*.

2.5 COMPLIANCE WITH SITING STANDARDS

Demonstration of compliance with the siting criteria as required under WAC 173-303-282(6) and (7) is addressed in the following sections.

2.5.1 Criteria for Elements of the Natural Environment

The following addresses measures that will be in place for the Tank CH-TRUM Waste Packaging Subsystems to protect the natural environment. Each element of the criteria identified in WAC 173-303-282(6) is addressed.

- 2.5.1.1 Earth.** This section addresses the potential for the release of waste into the environment because of structural damage resulting from conditions of the earth at the Tank CH-TRUM Waste Packaging Subsystems.

2.5.1.1.1 Seismic Consideration. No active faults, or evidence of a fault that has had displacement during Holocene times, have been found at the Hanford Site (DOE/RL-0164). The youngest faults recognized on the Hanford Site occur on Gable Mountain, over 4.5 kilometers north of the 200 East Area. These faults are of Quaternary age and are considered "capable" by the Nuclear Regulatory Commission (NUREG-0892).

The Tank CH-TRUM Waste Packaging Subsystems at both the 241-B and 241-T tank farms will be designed and located in Zone 2B as identified in the Uniform Building Code (ICBO 1991). The design of the Tank CH-TRUM Waste Packaging Subsystems for seismic risk will be evaluated in accordance with DOE 6430.1A, *General Design Criteria*.

2.5.1.1.2 Subsidence. The Tank CH-TRUM Waste Packaging Subsystems will be located in the 200 East and 200 West Areas of the Hanford Site. These areas of the Hanford Site are not considered subject to subsidence (PNNL-6415).

2.5.1.1.3 Slope or Soil Instability. The Tank CH-TRUM Waste Packaging Subsystems will not be located in an area of slope or soil instability, or in an area affected by unstable slope or soil conditions (PNNL-6415).

2.5.1.2 Air. The Tank CH-TRUM Waste Packaging Units will not utilize incineration, but will have processing tanks and packaging systems tied to an emissions control system. Air emission requirements will be identified as the system design matures and as part of the Part B permitting process. Discussion of measures taken to reduce air emissions resulting from incineration is not applicable.

2.5.1.3 Water. This section addresses the potential for contaminating water of the State in the event of a release of waste.

2.5.1.3.1 Surface Water. The following sections address considerations for the protection of surface water.

Flood, Seiche, and Tsunami Protection

Three sources of potential flooding of the Hanford Site are considered: (1) the Columbia River, (2) the Yakima River, and (3) storm-induced run-off in ephemeral streams draining the Hanford Site. No perennial streams occur in the central part of the Hanford Site. Figure 2 shows the 100-year flood plain of the Columbia River, Yakima River, and the Cold Creek probable maximum flood.

The flow of the Columbia River is controlled largely by several upstream dams that are designed to reduce major flood flows. The probable maximum flood for the Columbia River downstream of Priest Rapids Dam has been calculated to be 40,000 cubic meters per second (m^3/s). The flow is greater than the 500-year flood, and although this flood would inundate parts of the 100 Area located adjacent to the Columbia River, this flood would not impact the central plateau on the Hanford Site (i.e., 200 East or 200 West Areas) (PNNL-6415).

The maximum flood recorded in the Yakima River at Kiona, Washington, was 1,900 m³/s during December 1933. The recurrence interval for the 1933 flood is estimated to be 170 years. The flood only impacted the southernmost part of the Hanford Site in the vicinity of the Horn Rapids Dam. Since that flood there have been significant impoundments in the Yakima River Basin to support irrigation that reduces this threat. The overall magnitude of the flow between the Columbia River and Yakima River (40,000 m³/s versus 1,900 m³/s) renders the threat of flooding from the Yakima River to be insignificant in comparison to that from the Columbia River (PNNL-6415).

The only other potential source of flooding of the Hanford Site is run-off from a large precipitation event in the Cold Creek watershed. This event could result in flooding of the ephemeral Cold Creek. Pacific Northwest National Laboratory (PNL-4219) has given an estimate of the probable maximum flood using conservative values of precipitation, infiltration, surface roughness, and topographic features. The impact associated with the maximum flood in the Cold Creek watershed would be limited to portions of land along State Route 240 (PNNL-6415).

The results from past hydrologic analysis associated with the potential flooding of the Columbia River, Yakima River, and Cold Creek watershed show that these waters would not impact the proposed Tank CH-TRUM Waste Packaging Subsystems.

The Hanford Site is not located in an area subject to seiches or coastal flooding, including tsunami or storm surges.

Perennial Surface Water Bodies

The Tank CH-TRUM Waste Packaging Subsystems are both non-land-based facilities as defined in WAC 173-303-282(3)(i). The nearest perennial surface water body is well in excess of the 500 feet from the systems as required by WAC 173-303-282(6)(c)(i)(B)(I).

Surface Water Supply

The Tank CH-TRUM Waste Packaging Subsystems will not be located within any area designated as a watershed and will be located well in excess of 500 feet from the nearest surface water intake for domestic water, consistent with WAC 173-303-82(6)(c)(i)(C)(II).

2.5.1.3.2 Groundwater. The following sections address consideration for the protection of groundwater. The Tank CH-TRUM Waste Packaging Subsystems will be non-land-based units as defined by WAC 173-303-282(3)(i). These facilities will be located outside of both the 100-year and 500-year flood plains.

Depth to Groundwater

The depth to groundwater in both the 200 East and 200 West Areas generally is greater than 60 meters.

Groundwater Management Areas and Special Protection Areas

The proposed construction and operation of the two waste packaging subsystems will minimize groundwater impacts through the use of secondary containment systems and is not expected to result in an increased potential for release of mixed waste to the groundwater or to a special protection area.

Groundwater Intakes

The Tank CH-TRUM Waste Packaging Subsystems will not be located within 500 feet of any groundwater intake for domestic water, consistent with the criteria in WAC 173-303-282(6)(c)(ii)(D)(I).

2.5.1.4 Plants and Animals. The following sections address consideration to reduce the potential for waste contaminating plant and animal habitat in the event of a release of waste. The Tank CH-TRUM Waste Packaging Subsystems will be over 0.4 kilometers from any of the following.

2.5.1.4.1 Wetlands. The Tank CH-TRUM Waste Packaging Subsystems will not be located near any wetlands.

2.5.1.4.2 Designated Critical Habitat. The Tank CH-TRUM Waste Packaging Subsystems will not be located in areas designated as critical habitat for federally listed threatened or endangered species as defined by the *Endangered Species Act of 1973*.

2.5.1.4.3 State Designated Habitat. The Tank CH-TRUM Waste Packaging Subsystems will not be located in areas designated by the Washington State Department of Wildlife as habitat essential to the maintenance or recovery of any state-listed threatened or endangered species.

2.5.1.4.4 Natural Area Preserves. The Tank CH-TRUM Waste Packaging Subsystems will not be located in any natural area acquired or voluntarily registered or dedicated under Chapter 79.70 Revised Code of Washington.

2.5.1.4.5 Wildlife Refuge, Preserve, or Bald Eagle Protection Area. The Tank CH-TRUM Waste Packaging Subsystems will not be located in a state or federally designated wildlife refuge, preserve, or bald eagle protection area.

2.5.2 Criteria for Elements of the Built Environment

The following sections address the locational factors affecting protection of the built environment. Each element of the criteria for non-land-based facilities or units identified in WAC 173-303-282(7) is addressed.

2.5.2.1 Adjacent Land Use. This section addresses the setback criteria for adjacent land use. The Tank CHTRUM Waste Packaging Subsystems in the 200 East Area will be located approximately 400 meters from the boundary for the 200 East Area. Similarly, the Tank

CH-TRUM Waste Packaging and Support Equipment System in the 200 West Area will be located approximately 900 meters from the boundary of the 200 West Area.

2.5.2.2 Special Land Uses. This section addresses setback criteria for special land uses.

2.5.2.2.1 Wild and Scenic Rivers. The Tank CH-TRUM Waste Packaging Subsystems located in the 200 East Area will be at least 11 kilometers from the Columbia River, which has been proposed as a Wild and Scenic River. Similarly, the Tank CH-TRUM Waste Packaging Subsystems located in the 200 West Area will be at least 9 kilometers from the Columbia River. The Tank CH-TRUM Waste Packaging Subsystems will not be within the viewshed of those using the Columbia River.

2.5.2.2.2 Parks, Recreation Areas, National Monuments. The Tank CH-TRUM Waste Packaging Subsystems will be situated significantly farther than 0.4 kilometers from the nearest state or federally designated park, recreation area, or national monument. The Tank CH-TRUM Waste Packaging Subsystems are not within 0.4 kilometers of the Hanford Reach National Monument (65 FR 37253).

2.5.2.2.3 Wilderness Area. The Tank CH-TRUM Waste Packaging Subsystems will be located more than 0.4 kilometers from any wilderness areas as defined by the *Wilderness Act of 1964*.

2.5.2.2.4 Farmland. The Tank CH-TRUM Waste Packaging Subsystems will be more than 0.4 kilometers from any commercial or private prime farmland.

2.5.2.3 Residences and Public Gathering Places. This section discusses factors affecting residences and public gathering places. The Tank CH-TRUM Waste Packaging Subsystems will be located more than 0.4 kilometers from residences and public gathering places.

2.5.2.3.1 Incineration. Incineration will not be a process used at the Tank CH-TRUM Waste Packaging Subsystem.

2.5.2.3.2 Land Use Compatibility. The Hanford Site conforms to local land use zoning designation requirements.

2.5.2.3.3 Archeological Sites and Historic Sites. There are no known archaeological or Native American religious sites on or next to the proposed Tank CH-TRUM Waste Packaging Subsystems sites.

3.0 TEN-YEAR COMPLIANCE HISTORY

Appendix B contains formal notices of Hanford Site violations and/or notices of penalties of the Applicant, the U.S. Department of Energy, in accordance with WAC 173-303-281.

4.0 JUSTIFICATION OF NEED

The U.S. Department of Energy issued an Integrated Mission Acceleration Plan (RPP-13678) specifically identifying the accelerated removal of CH-TRUM wastes to accelerate the closure of Hanford Site tank farm single-shell tanks. Sixty-seven of the 149 single-shell tanks have been reported to have leaked. The proposed facility, described herein, is key to the removal of CH-TRUM waste from Hanford Site.

5.0 IMPACT ON OVERALL CAPACITY ON THE HANFORD SITE AND THE STATE OF WASHINGTON

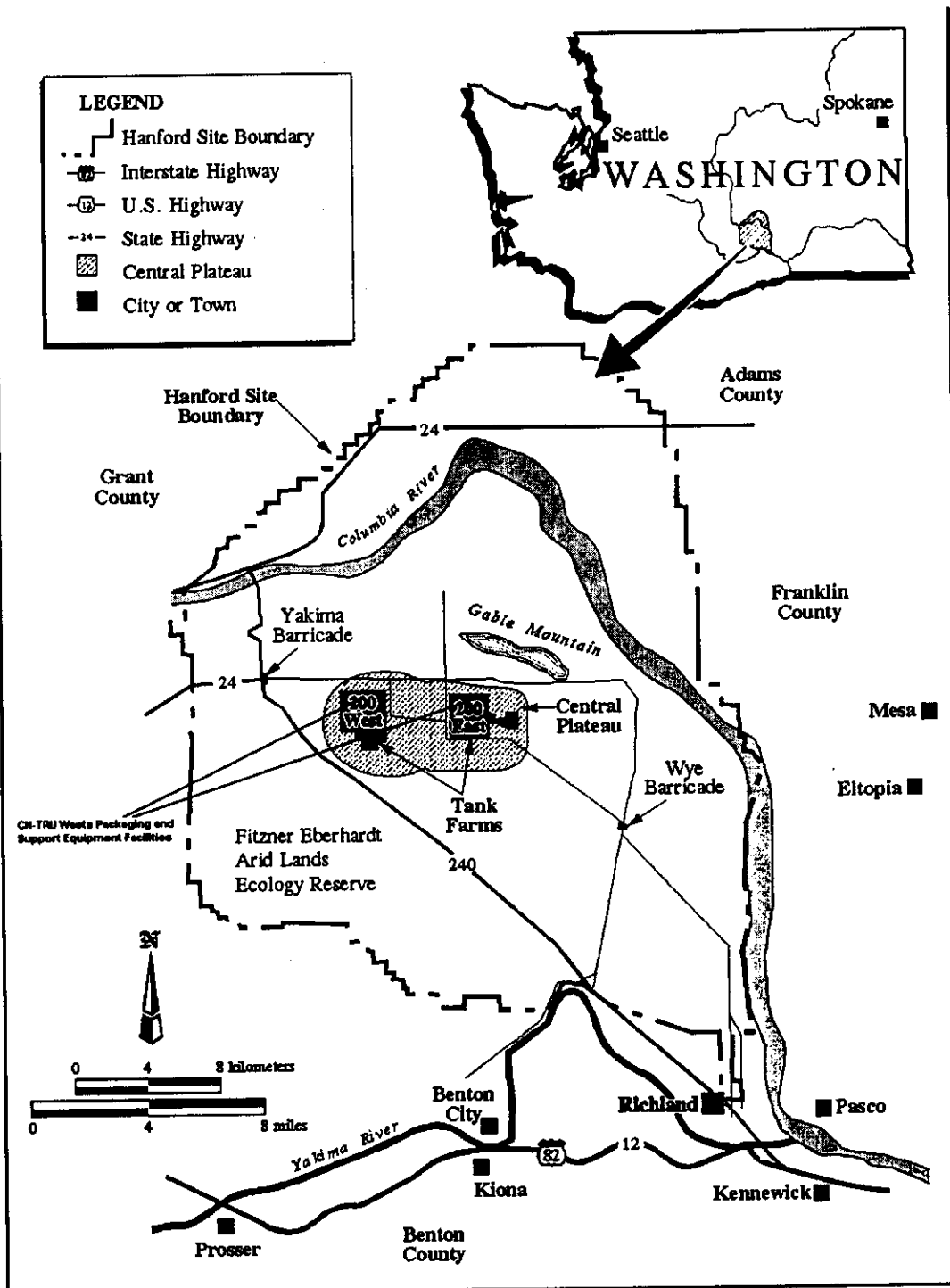
The current capacity for the processing of CH-TRUM waste is limited within Washington State and on the Hanford Site. The CH-TRUM Waste Packaging Facility will provide the means for responsible storage of Hanford Tank Farms CH-TRUM wastes and will comply with all relevant and applicable criteria. The packaged CH-TRUM waste will be disposed in the DOE deep geologic repository Waste Isolation Pilot Plant in New Mexico. This proposed facility will support the current on-site mission of waste management and environmental restoration and remediation.

6.0 REFERENCES

- 65 FR 37253, 2000, Proclamation 7319 of June 9, 2000, "Establishment of the Hanford Reach National Monument," *Federal Register*, June 13, 2000.
- COE, 1969, *Lower Columbia River Standard Project Flood and Probable Maximum Flood*, U.S. Army Corps of Engineers, North Pacific Division, Portland, Oregon.
- DOE/EIS-0189-SA2, 1998, *Supplement Analysis for the Tank Waste Remediation System*, U.S. Department of Energy, Washington, D.C.
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- DOE/EIS-0222D, 1996, *Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE Order 6430.1A, *General Design Criteria*, U.S. Department of Energy, Washington D.C.
- DOE/RL-0164, *Consultation Draft, Site Characterization Plan, Reference Repository Location, Hanford Site, Washington*, Vols. 1-9, U.S. Department of Energy, Washington, D.C.
- DOE/RL-88-21, *Hanford Facility Dangerous Waste Part A Permit Application*, Vols. 1-3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE/RL-91-28, *Hanford Facility Dangerous Waste Permit Application, General Information Portion*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

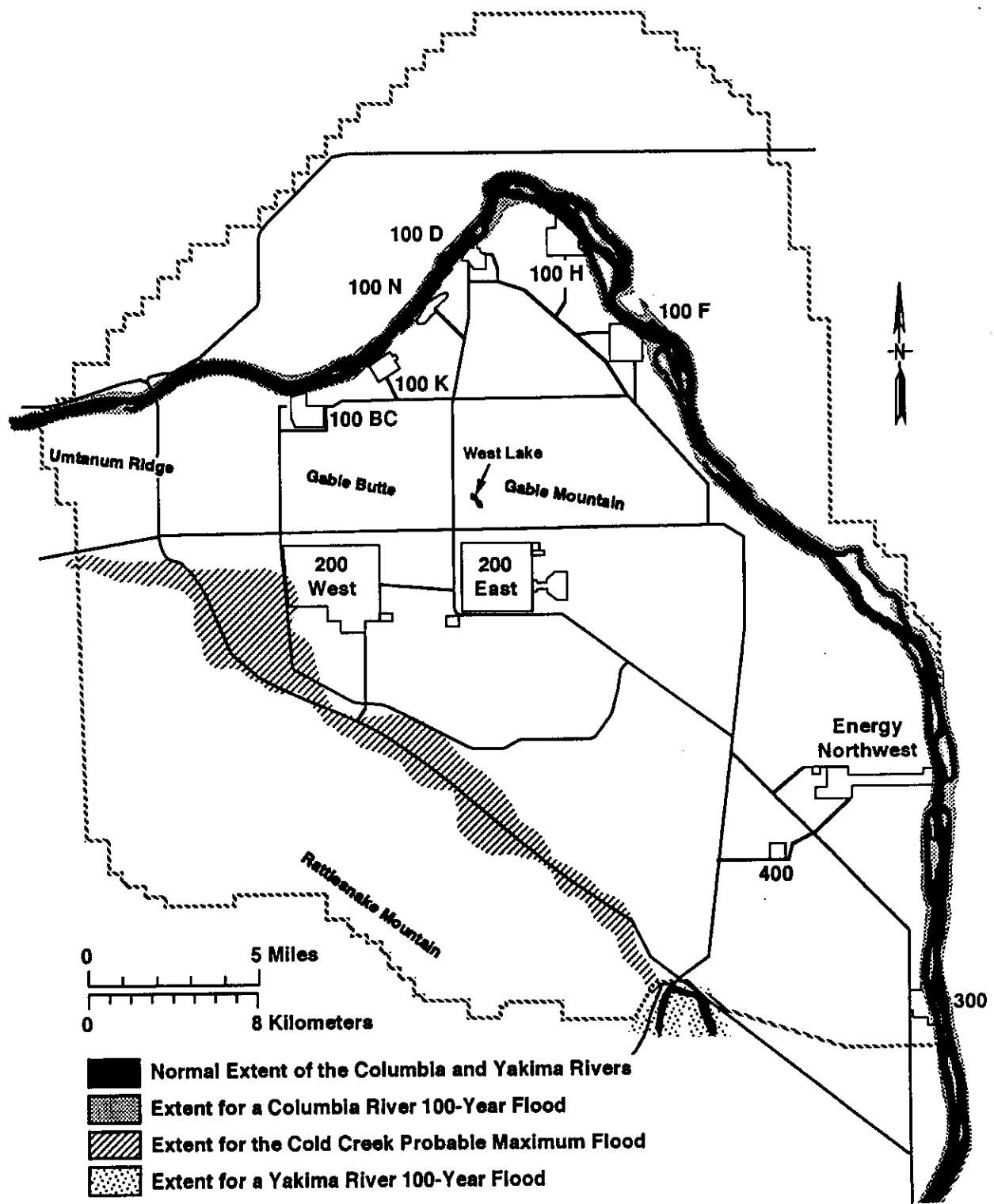
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- FEMA, 1980, *Flood Insurance Study: Benton County Washington*, Federal Emergency Management Agency, Federal Insurance Administration, Washington, D.C.
- ICBO, 1991, "Earthquake Regulations," *Uniform Building Code*, UBC Section 2312, International Conference of Building Officials, Whittier, California.
- NUREG-0892, *Safety Evaluation Report (Related to the Operation of WPPSS Nuclear Project) No. 2, Supplement No. 1*, U.S. Nuclear Regulatory Commission, Washington, D.C.
- PNL-4219, 1981, *Flood Risk Analysis of Cold Creek Near the Hanford Site*, Pacific Northwest National Laboratory, Richland, Washington.
- PNNL-6415, 2002, *Hanford Site National Environmental Policy Act (NEPA) Characterization*, Revision 14, Pacific Northwest National Laboratory, Richland, Washington.
- RPP-13300, 2002, *Origin Of Wastes in the B-200 and T-200 Series Single-Shell Tanks*, CH2M HILL, Richland, Washington.
- RPP-13678, 2003, *Integrated Mission Acceleration Plan*, Rev. 0, CH2M HILL, Richland, Washington.
- RPP-13873, 2003, *Origin and Classification of Wastes in Single-Shell Tanks 241-T-110 and 241-T-111*, CH2M HILL, Richland, Washington.
- RLO-76-4, *Evaluation of Impact of Potential Flooding Criteria on the Hanford Project*, U.S. Energy Research and Development Administration, Richland, Washington.

Figure 1. Hanford Site.



989K471-203 CDR

Figure 2. 100-Year Floodplain of the Columbia River and Yakima River and the Cold Creek Probable Maximum Flood.



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APPENDIX A

LOCATION MAPS

Figure A-1. General Overview of Hanford Site (H-6-958).
- Official Use Only -

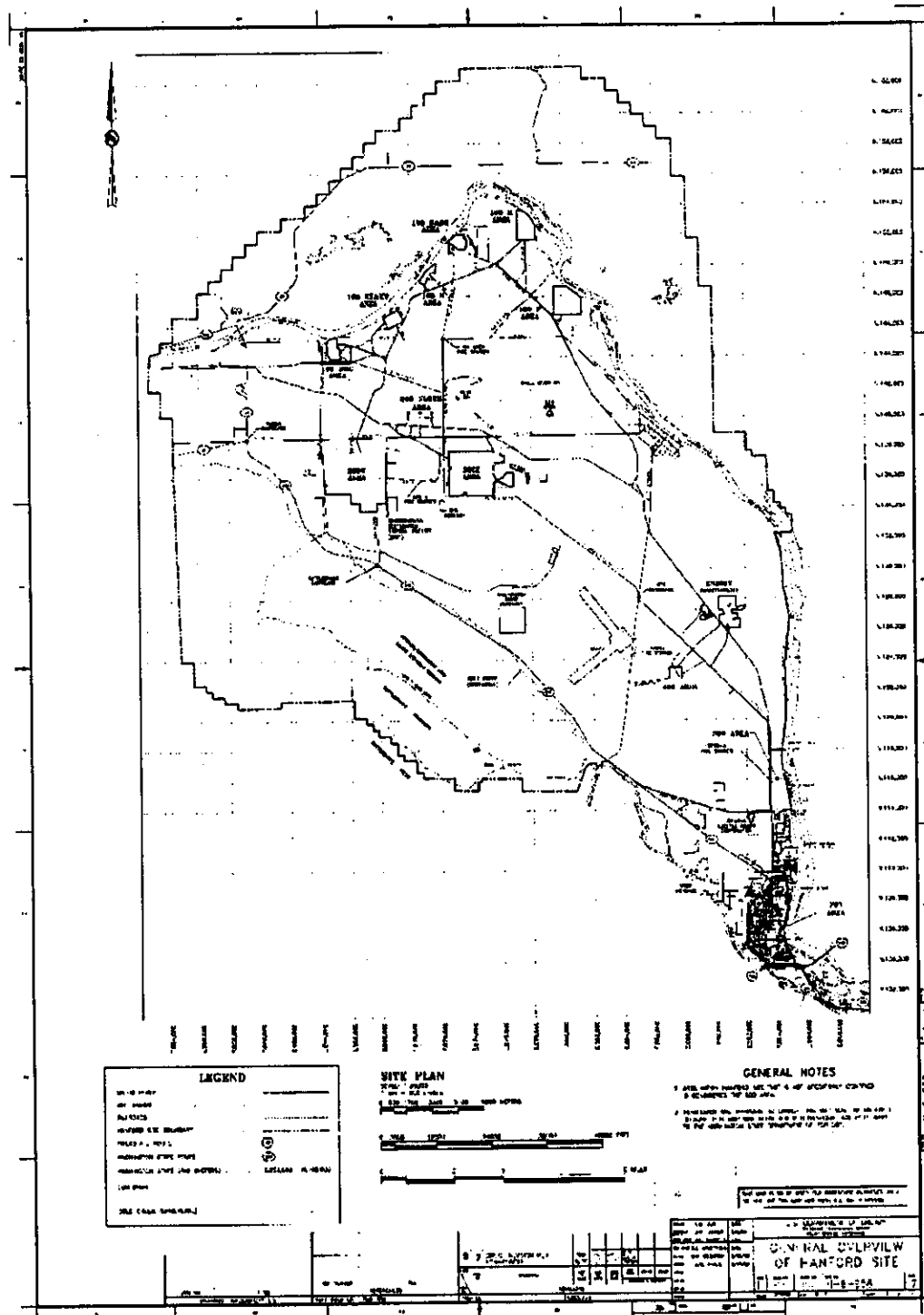
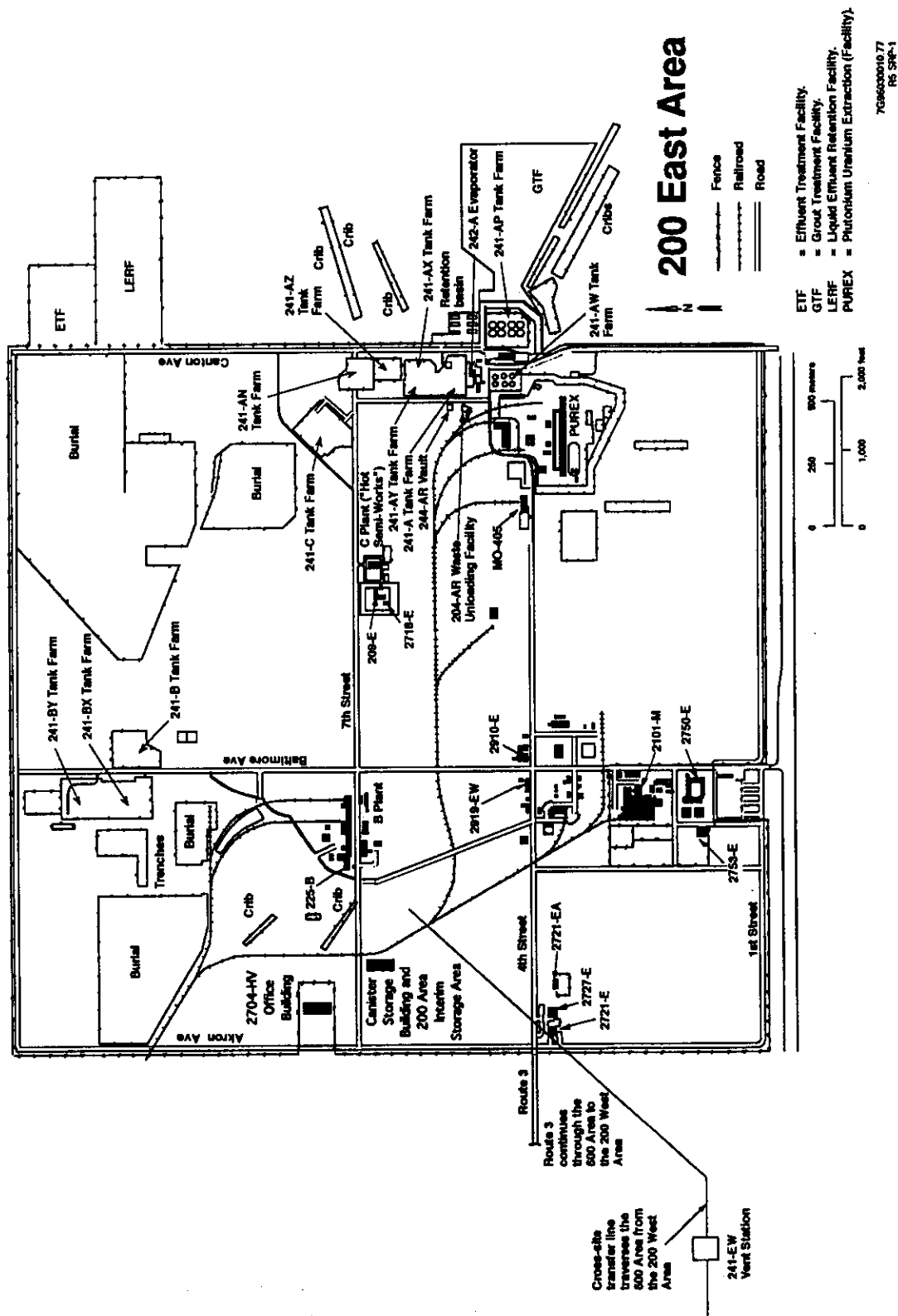


Figure A-2. 200 East Area.
- Official Use Only -



7C00030010 76
R# 88P-1



Figure A-4. 241-B Plant Site Plan.

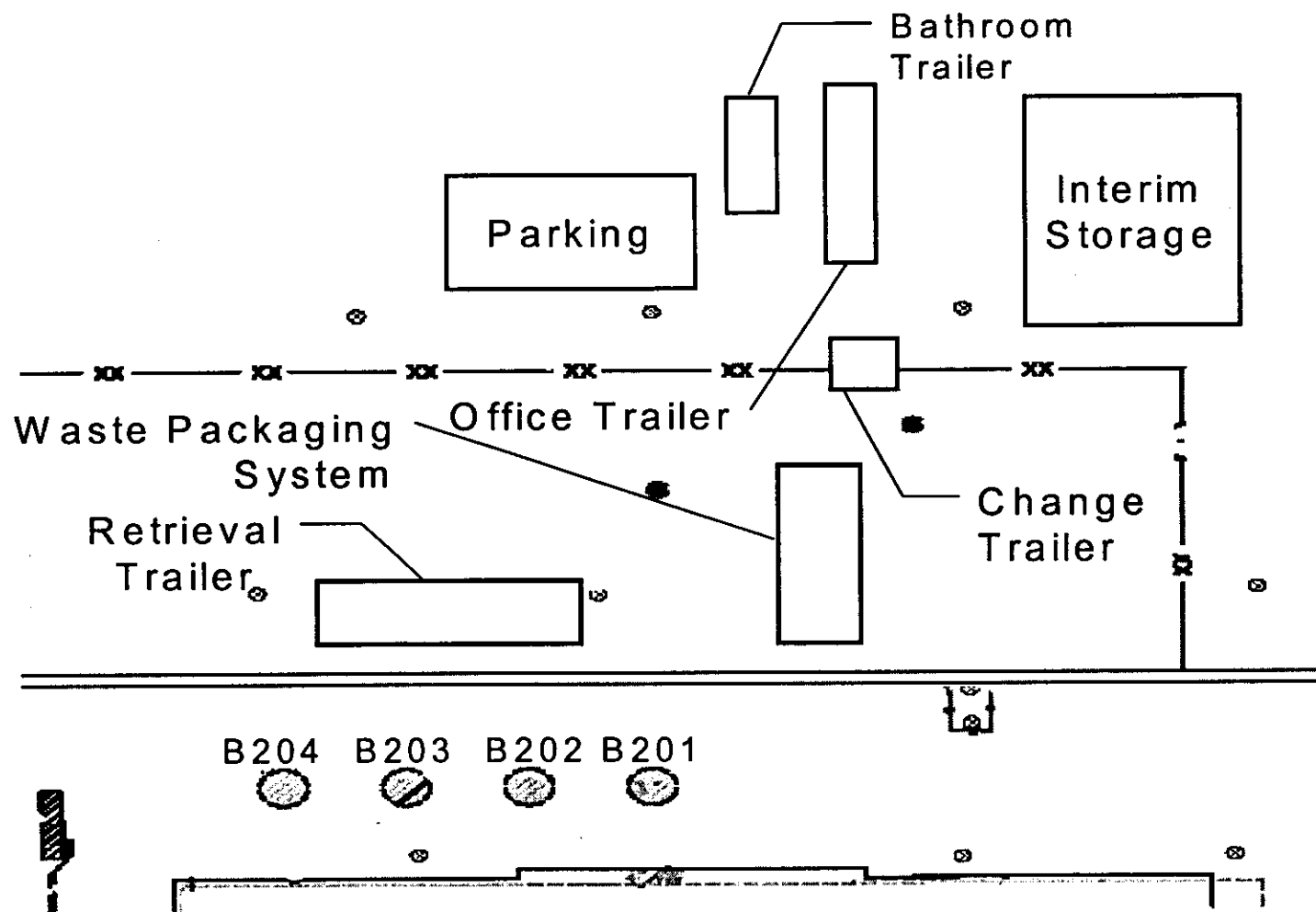


Figure A-5. 241-T Plant Site Plan.

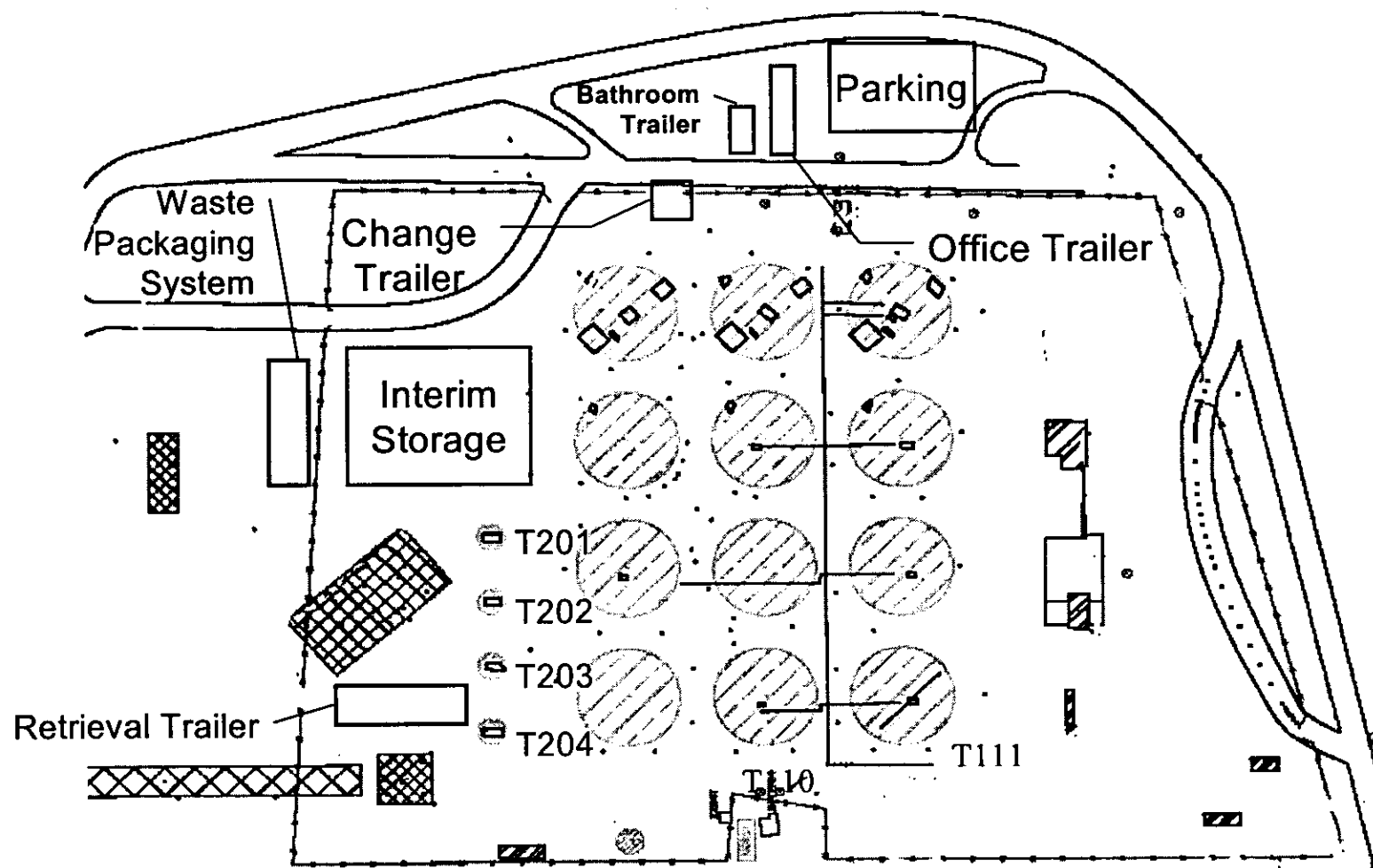
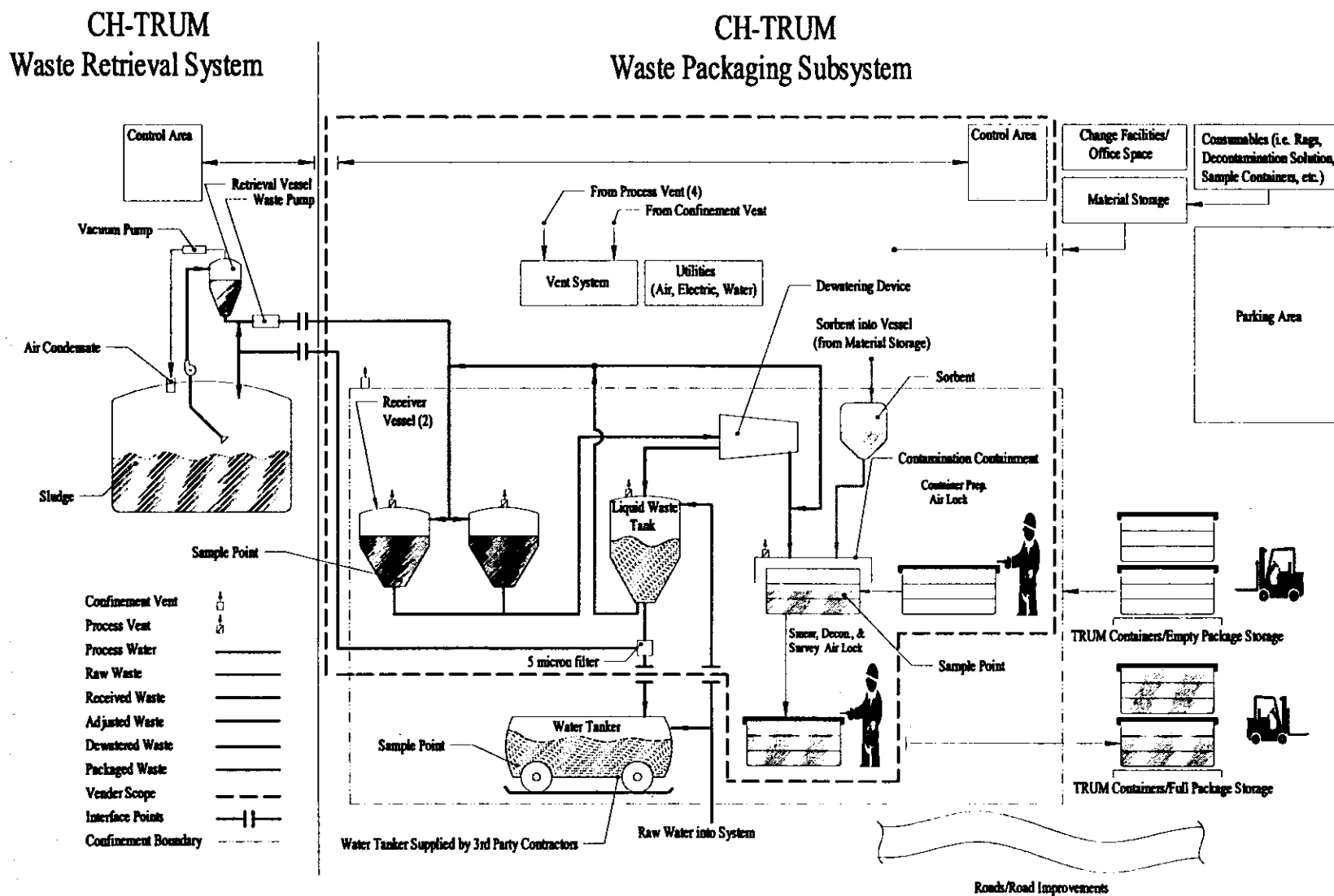


Figure A-6. CH-TRU Waste Packaging Subsystem Process Flow Diagram



APPENDIX B

FORMAL NOTICES OF VIOLATIONS AND/OR NOTICES OF PENALTIES

Hanford Site Compliance Violations and Response Summary

Tuesday, April 29, 2003

Received Date: April 14, 2003

Agency: U.S. Environmental Protection Agency

Summary:

The U.S. Environmental Protection Agency (EPA) issued a Notice of Penalty (NOP) letter to the U.S. Department of Energy (DOE), Richland Operations Office (RL) on April 3, 2003, that assesses a penalty against DOE RL for alleged violation of a Comprehensive Environmental Response Compensation and Liability Act (CERCLA) requirement that was agreed to within the Hanford Federal Facility Agreement and Consent Order (HFFACO). In this letter, EPA alleges that DOE RL failed to complete HFFACO Milestone M-34-08. This milestone required initiation of full scale sludge removal from the K East Basin located in the 100 K Area by December 31, 2002. The total penalty assessed for this alleged violation for the period through April 1, 2003, is \$76,000.

Response(s):

DOE RL made a decision to not invoke dispute resolution.

Received Date: February 7, 2003

Agency: State of Washington Department of Ecology

Summary:

The State of Washington Department of Ecology (Ecology) issued a Notice of Non-Compliance letter to the DOE Office of River Protection (ORP) and CH2M HILL Hanford Group, Inc. (CHG) on February 6, 2003, that documents their concerns regarding the inspection and repair of leak detection equipment associated with AY, AZ, and SY Double-Shell Tank (DST) Farms. Ecology alleged that leak detection equipment associated with the AY, AZ, and SY Tank Farms has not been inspected or maintained in accordance with applicable Washington Administrative Code (WAC) or Code of Federal Regulations requirements. This Notice of Non-Compliance identified three alleged violations and one concern.

Response(s):

DOE and its contractors have agreed to corrective measures with Ecology. Corrective actions are in progress.

Received Date: December 10, 2002

Agency: State of Washington Department of Ecology

Summary:

Ecology issued a Notice of Non-Compliance letter to RL, ORP, and CHG on December 3, 2002, that documents their concerns regarding the filling of tank farm dilution tanks. Ecology alleged that activities associated with the filling of tank farm dilution tanks and State Waste Discharge Permit (ST 4508) are not in compliance with the provisions of the State of Washington Water Pollution Control Law, Chapter 90.48 Revised Code of Washington (RCW), as amended; the Federal Water Pollution Control Act (The Clean Water Act), and per WAC 173-216-020 groundwater requirements. The Notice of Non-Compliance identified two alleged violations.

Response(s):

DOE and its contractors have chosen to not submit requested Certificates of Compliance.

DOE letter 03-ED-024, dated February 7, 2003, addresses the two corrective measures and provides a status for each.

Ecology letter, dated March 21, 2003, provides Ecology's acceptance of documentation submitted in response to the Notice of Non-Compliance. Ecology considers the inspection/investigation closed.

Received Date: August 13, 2002

Agency: State of Washington Department of Ecology

Summary:

Ecology issued a Notice of Non-Compliance letter to ORP on August 8, 2002, that documents their concerns regarding the leak detection system associated with temporary transfer lines used at the Single-Shell Tank (SST) Farms. Ecology alleged that the leak detection system associated with temporary transfer lines used at the SST Farms does not meet the WAC 173-303-400, Interim Status Facility Standards. The Notice of Non-Compliance identified two alleged violations and two concerns.

Response(s):

ORP letter 02-OMD-059, dated August 29, 2002, transmitted a request for extension of the corrective measures due dates to Ecology. An extension to October 23, 2002, was requested for Corrective Measure 1 and December 20, 2002, for Corrective Measure 2.

Ecology letter, dated September 18, 2002, grants the requested extension.

ORP letter 02-ED-039, dated December 17, 2002, transmitted the requested temporary transfer line management plan to Ecology.

Received Date: February 19, 2002

Agency: U.S. Environmental Protection Agency

Summary:

EPA issued a letter to the DOE on February 11, 2002, regarding waste management practices at the 233-S Plutonium Concentration Facility. The problem originated from the calibration and use of non-destructive assay (NDA) equipment for the designation of waste as low-level or transuranic waste. The letter claims that there was a "Failure to comply with waste designation requirements in the approved Sampling and Analysis Plan. The use of NDA data for designation was discussed during the Sampling and Analysis Plan development, but the plan was never revised to allow the use of NDA data for waste designation." There were no actions, fines, or penalties associated with this Notice of Violation (NOV).

Response(s):

None to date.

Received Date: October 17, 2001

Agency: Washington State Department of Health

Summary:

A NOV and Compliance Order was received from the Washington State Department of Health (WDOH) on October 15, 2001. WDOH alleges that the DOE prime contractor Fluor Hanford, Inc. (FHI) is in violation of WAC 246-247-040(4), which states that all existing emission units shall utilize As Low As Reasonably Achievable Control Technology.

DOE and its contractors were required in AIR 01-505 to develop procedures for indication devices for all emission units to ensure they "are monitored, trended and evaluated for changing conditions that may indicate abatement controls are not operating as designed."

It is alleged that DOE and several of its contractors did not comply by the required August 17, 2001 deadline. An additional 30 days were given to comply (AIR 01-811). The response provided to WDOH on October 1, 2001, contained a FHI management directive requiring compliance by the projects.

It is alleged that the project procedures were not provided until WDOH requested them on October 3, 2001. WDOH alleges that these procedures did not accomplish company wide compliance to the WDOH requirements or to FHI's own management directive.

Response(s):

RL letter 02-RCA-035, dated November 1, 2001, provided a response to the NOV and Compliance Order.

AIR 01-1105, dated November 15, 2001, provided WDOH closure of issues associated with letter AIR 00-1008.

Received Date: March 27, 2001

Agency: State of Washington Department of Ecology

Summary:

Ecology issued a NOP on March 26, 2001, in response to the identification of alleged waste management violations associated with the storage of a potentially shock sensitive chemical (trade name Collodion) as either waste or product in the 222-S Laboratory Complex, Waste Sampling and Characterization Facility, and Plutonium Finishing Plant (PFP) laboratories. The NOP levies a penalty of \$57,800 against the DOE and FHI.

Response(s):

RL letter 01-RCA-245, dated April 9, 2001, transmitted an Application for Relief from Penalty No. 01NWPKW-2467 to Ecology.

Ecology letter, dated July 26, 2001, provides Ecology's rejection of the DOE Application for Relief from NOP No. 01NWPKW-2467. The Ecology letter identifies that the penalty described in NOP No. 01NWPKW-2467 is due and payable within 30 days of receipt of the letter.

RL letter 01-RCA-401, dated August 10, 2001, clarified the date of receipt of Ecology's letter. Due to problems encountered with the original letter, it was necessary for Ecology to reissue the letter. RL received the reissued letter on August 1, 2001. It is RL's position that the 30 day clock starts on August 1, 2001.

Received Date: March 26, 2001

Agency: Washington State Department of Health

Summary:

A NOV and Compliance Order was received from the WDOH on March 23, 2001. WDOH alleges that DOE failed to properly notify WDOH following a continuous air monitor alarm in the 291-Z-1 stack of the PFP on February 23, 2001. The NOV and Compliance Order requires DOE to propose to WDOH a corrective action to ensure this does not recur. The response is due within 60 days of the date of the WDOH letter. WDOH also posed a number of questions regarding the extent and nature of the release, as well as decisions that were made during and after the event.

Response(s):

RL letter 01-RCA-267, dated May 2, 2001, provided a response to the NOV and Compliance Order.

Received Date: June 27, 2000

Agency: U.S. Environmental Protection Agency

Summary:

EPA issued a letter to DOE and Bechtel Hanford, Inc. (BHI) on June 13, 2000, regarding waste management practices at multiple operable units. The letter claims that DOE and BHI violated CERCLA requirements agreed to in the HFFACO with respect to waste management practices at the 100-F, 100-K, 100-BC, 200-ZP-1, and 300-FF-2 operable units.

Response(s):

E mail, dated June 30, 2000, from Karen Hornbuckle, BHI, documented that the requirement to obtain EPA approval for all Investigation Derived Waste (IDW) shipped to Environmental Restoration Disposal Facility (ERDF) has been implemented.

RL letter 00-OSS-490, dated September 22, 2000, provided a point-by-point response to Ecology's letter of June 13, 2000.

RL letter 01-RCA-092, dated December 29, 2000, documented that the seven drums had been removed from the biosite and properly dispositioned. There was no record or evidence of any releases at the drum storage sites.

Received Date: June 22, 2000

Agency: State of Washington Department of Ecology

Summary:

Ecology issued Administrative Order No. 00NWPKW-1251 on June 13, 2000. The Administrative Order requires the DOE and CHG to comply with Chapter 70.105 RCW, the Hazardous Waste Management Act, Chapter 173-303 WAC, by reference Chapter 40, Code of Federal Regulations, and certain actions described as they apply to determining the integrity of the DST System.

Response(s):

RL letter 00-ORL-065, dated June 20, 2000, RL and ORP gave notice of their election to exercise their dispute resolution rights under Article VIII of the HFFACO.

Ecology letter, dated June 27, 2000, provided Ecology's determination that Administrative Order No. 00NWPKW-1251 is not subject to dispute resolution within the HFFACO.

ORP letter 00-OSD-080, dated July 19, 2000, submitted a Statement of Dispute signifying elevation of the issue to the Inter-Agency Management Integration Team.

ORP letter 00-OSD-108, dated September 18, 2000, submitted information in response to Actions 1.A, 1.B, 1.C, 2, 3, and 4.

Ecology letter, dated November 2, 2000, provided Ecology's identified deficiencies with DOE's September 18, 2000, submittal. The September 18, 2000, submittal addressed Action Items 1.A, 1.B, 1.C, 2, 3, and 4 of Administrative Order No. 00NWPKW-1251. Actions resulting from Ecology's letter will be tracked under the Environmental Actions Tracking System Item 20001102-ECL-LET-REQ. Ecology's letter also changed the due date for submittal of information required by Action 5 of the Administrative Order from December 16, 2000, to December 18, 2000.

ORP letter 00-OSD-175, dated December 18, 2000, submitted information required by Action Item 5 of the Administrative Orders.

ORP letter 00-OSD-177, dated December 28, 2000, requests Ecology's formal concurrence with tanks selected for ultrasonic testing in Fiscal Year (FY) 2001.

Ecology letter, dated January 24, 2001, provided Ecology's concurrence with tanks selected for ultrasonic testing in FY 2001.

Ecology letter, dated April 23, 2001, provided Ecology's acknowledgement of receipt of information required by Items 1A, 3, 4, and 5 of the Administrative Order. Ecology considers items 1A and 5 completed. Ecology also accepted the visual inspection plans submitted in accordance with the requirements of Items 3 and 4 of the Administrative Order. Ecology will consider these items completed provided the visual inspection plans are implemented within 60 days of the date of this letter

Received Date: June 20, 2000

Agency: State of Washington Department of Ecology

Summary:

Ecology issued NOP Incurred and Due No. 00NWPKW-1249 on June 13, 2000. The NOP assesses a penalty against DOE in the amount of \$200,000 under the provisions of Article IX, Stipulated Dangerous Waste Penalties, within the HFFACO. This NOP was assessed for failure to meet the provisions of Article VII within the HFFACO, with respect to completion of major HFFACO Milestone M-32.

Response(s):

RL letter 00-ORL-065, dated June 20, 2000, RL and ORP gave notice of their election to exercise their dispute resolution rights under Article VIII of the HFFACO.

Ecology letter, dated June 27, 2000, provided Ecology's determination that NOP Incurred and Due No. 00NWPKW-1249 is subject to dispute resolution as provided by Article VIII of the HFFACO.

ORP letter 00-OSD-080, dated July 19, 2000, submitted a Statement of Dispute signifying elevation of the issue to the Inter-Agency Management Integration Team.

Ecology letter, dated August 24, 2000, provided Ecology's Final Determination in the matter pursuant to HFFACO Part Two, Article VIII, Paragraph 30 (D). This Final Determination was issued solely for resolution of disputes brought forth by DOE in relation to NOP Incurred and Due No. 00NWPKW-1249. This Final Determination demands immediate payment of the entire penalty amount described in NOP Incurred and Due No. 00NWPKW-1249 upon receipt of the Final Determination. This action will be tracked separately.

Received Date: June 16, 2000

Agency: State of Washington Department of Ecology

Summary:

Ecology issued Administrative Order No. 00NWPKW-1250 on June 13, 2000. The Administrative Order requires the DOE and CHG to comply with Chapter 70.105 RCW, the Hazardous Waste Management Act, Chapter 173-303 WAC, by reference Chapter 40, Code of Federal Regulations, and certain actions described as they apply to determining the integrity of the DST System.

Response(s):

RL letter 00-ORL-065, dated June 20, 2000, RL and ORP gave notice of their election to exercise their dispute resolution rights under Article VIII of the HFFACO.

Ecology letter, dated June 27, 2000, provided Ecology's determination that Administrative Order No. 00NWPKW-1250 is not subject to dispute resolution within the HFFACO.

ORP letter 00-OSD-080, dated July 19, 2000, submitted a Statement of Dispute signifying elevation of the issue to the Inter-Agency Management Integration Team.

ORP letter 00-OSD-108, dated September 18, 2000, submitted information in response to Actions 1.A, 1.B, 1.C, 2, 3, and 4.

Ecology letter, dated November 2, 2000, provided Ecology's identified deficiencies with DOE's September 18, 2000, submittal. The September 18th submittal addressed Action Items 1.A, 1.B, 1.C, 2, 3, and 4 of Administrative Order No. 00NWPKW-1250. Actions resulting from Ecology's letter will be tracked under EATS Item 20001102-ECL-LET-REQ. Ecology's letter also changed the due date for submittal of information required by Action 5 of the Administrative Order from December 16, 2000, to December 18, 2000.

ORP letter 00-OSD-175, dated December 18, 2000, submitted information required by Action Item 5 of the Administrative Orders.

ORP letter 00-OSD-177, dated December 28, 2000, requests Ecology's formal concurrence with tanks selected for ultrasonic testing in FY 2001.

Ecology letter, dated January 24, 2001, provided Ecology's concurrence with tanks selected for ultrasonic testing in FY 2001.

Ecology letter, dated April 23, 2001, provided Ecology's acknowledgement of receipt of information required by items 1A, 3, 4, and 5 of the Administrative Order. Ecology considers items 1A and 5 completed. Ecology also accepted the visual inspection plans submitted in accordance with the requirements of Items 3 and 4 of the Administrative Order. Ecology will consider these items completed provided the visual inspection plans are implemented within 60 days of the date of this letter.

Received Date: March 20, 2000

Agency: Washington State Department of Health

Summary:

WDOH has issued a NOV and Compliance Order as authorized by WAC 246-247-100(a) and RCW 70.94.332 for actions taken at the 244-AR Vault. The 244-AR Vault is located in the 200 East Area and serves as a waste transfer station. WDOH identified three violations and three compliance orders.

Response(s):

ORP letter 00-ESHQ-007, dated May 3, 2000, submitted response documentation demonstrating the three compliance orders have been completed. Compliance orders 1 and 2 were completed through revisions to HNF-IP-0842. The training requirement was accomplished by Tank Farm personnel attending training provided by WDOH. Compliance order 3 was met by submittal of a Notice of Construction (NOC) for Categorical Facility Entry and Surveillance on May 3, 2000.

Received Date: March 7, 2000

Agency: U.S. Environmental Protection Agency

Summary:

EPA has assessed penalties against RL in response to violations of CERCLA requirements that were agreed to within the HFFACO. The penalties assessed regard waste management practices at the 221-U Facility located in the 200 West Area. The two identified violations were described previously in a letter from the EPA to RL issued on November 17, 1999. The violations concern the failure to have an approved Waste Control Plan (WCP) and failure to sample waste per the approved Sampling and Analysis Plan (SAP). The total penalty assessed for both violations equals \$55,000.

Response(s):

RL letter 00-OSS-330, dated May 5, 2000, provided written confirmation to the EPA that the \$55,000 penalty was paid in full on April 18, 2000. Remittance was made electronically to the EPA Superfund Accounting Office in Pittsburgh, Pennsylvania.

Received Date: January 14, 2000

Agency: State of Washington Department of Ecology

Summary:

Ecology has formally denied the Application for Relief from Penalty submitted by RL and BHI on December 1, 1999, in response to Penalty #99NWKW-21 that was issued on November 17, 1999. The penalty was issued for failure to adequately designate waste stored in the 271-U 90-day accumulation area. RL and BHI may either pay the penalty in full or appeal the denial to the Pollution Control Hearings Board (PCHB).

Response(s):

RL letter 00-ERD-053, dated February 9, 2000, documented remittance of \$9,700 to the Fiscal Cashier, Ecology fulfilling the denial of the Application for Relief from Penalty received on January 14, 1999. Payment of the penalty does not constitute an admission by either or both respondents of the allegations of the NOP, liability under Washington State law, or of jurisdiction by Ecology over the specific subject matter of the NOP.

Received Date: November 18, 1999

Agency: U.S. Environmental Protection Agency

Summary:

EPA informed the DOE and BHI of CERCLA violations identified in letter issued November 17, 1999. Two violations were identified following an inspection of the 271-U 90-Day Accumulation area conducted by the Ecology on September 16, 1999. The 271-U 90-day accumulation area is located at U Plant in the 200 West Area.

Response(s):

RL letter 00-OSS-074, dated November 24, 1999, submitted documentation seeking to confirm a request for a 20-day extension to the due date for the requested written action plan. The request was originally made verbally during a meeting with a representative of the EPA on November 19, 1999. The request sought an extension of 20 days to December 17, 1999.

RL letter 00-OSS-097, dated December 16, 1999, submitted an Action Plan Identifying Corrective Actions and Responses to the EPA and Ecology in accordance with the approved extension. The Action Plan contained responses, corrective actions taken, and follow-up corrective actions for each violation. Responses were provided for each concern.

Ecology letter dated February 23, 2000, acknowledged receipt and accepts the Action Plan submitted by RL on December 16, 1999. Ecology has accepted the Action Plan as qualified by identified conditions, and considers the violation addressed and inspection closed.

E mail, dated April 17, 2000, documented completion of all six compliance commitments made in accordance with the corrective action plan submitted on December 16, 1999 (RL letter #00-

OSS-097): the 221-U Facility Canyon Disposal Initiative (CDI) SAP was revised on February 2, 2000, to include management of unknowns. EPA and Ecology approved the revision - three active WCPs were revised on February 2, 2000, to include treatment of waste as a standard practice as agreed to in regulatory meetings, approximately 14 inactive WCPs will be reviewed and revised prior to generation of additional waste - designation procedure BHI-FS-03, WOO2, was revised on February 7, 2000, to identify criteria used to evaluate process knowledge and now includes identification of all process knowledge documentation - training to identify and explain procedure changes was conducted on January 27, 2000, - modifications to the 221-U Facility CDI WCP were provided to the EPA and Ecology for review and were approved on February 2, 2000, - procedures were modified on February 7, 2000, to prohibit the use of standardized or boilerplate language in the development of Waste Profiles.

Received Date: November 18, 1999

Agency: State of Washington Department of Ecology

Summary:

Ecology assessed a penalty of \$9,700 against the DOE and BHI on November 17, 1999, under the provisions of the RCW 70.105.080. The penalty is the result of findings associated with an Ecology inspection of the 271-U 90-day accumulation area conducted on September 16, 1999.

Response(s):

RL letter 00-OSS-085, dated December 1, 1999, submitted an Application for Relief from Penalty in accordance with the provisions outlined original NOP issued by Ecology on November 17, 1999.

Ecology letter, dated January 12, 2000, transmitted a formal denial from relief from Penalty #99NWPKW-21/#99NWPKW-22 for reasons stipulated. RL and BHI have 30 days to either appeal the denial to the PCHB or pay the penalty in full. These actions will be tracked as a separate item.

RL letter 00-ERD-053, dated February 9, 2000, documented remittance of \$9,700 to the Fiscal Cashier, Ecology fulfilling the denial of the Application for Relief from Penalty received on January 14, 1999. Payment of the penalty does not constitute an admission by either or both respondents of the allegations of the NOP, liability under Washington State law, or of jurisdiction by Ecology over the specific subject matter of the NOP.

Ecology letter dated February 23, 2000, acknowledged receipt and accepts the Action Plan submitted by RL on December 16, 1999. Ecology has accepted the Action Plan as qualified by identified conditions, and considers the violation addressed and inspection closed.

Received Date: July 20, 1999

Agency: South Carolina Department of Health

Summary:

Following an investigation by the South Carolina Department of Health and Environmental Control, violation of state and federal regulations were identified. On May 20, 1999, a CNS-1-13G, Type B shipping cask was discovered upon receipt at the Chem-Nuclear Systems (CNS) at Barnwell, SC, to have removable contamination levels exceeding U.S. Department of Transportation limits. In addition, another incident involving a similar cask shipment on November 24, 1999, an unmanifested sample container rack and liquids were discovered in the cask upon receipt. Both casks had been shipped to CNS for maintenance work.

Response(s):

99-SFD-152, dated July 26, 1999, submitted RL corrective documentation to the South Carolina Department of Health as requested. The corrective action documentation included measures to prevent recurrence.

Letter, dated August 23, 1999 - The South Carolina Department of Health and Environmental Control reviewed the corrective measures submitted and found them to be adequate to preclude recurrence of the discrepancy that resulted in the NOV. This item is considered closed.

Received Date: February 16, 1999

Agency: U.S. Environmental Protection Agency

Summary:

EPA and Ecology conducted a Multi-Media Inspection (MMI) of the Hanford Site from May through July 1998. The inspection identified concerns that resulted in the issuance of three violations of Resource Conservation and Recovery Act (RCRA) regulations that include; storage without a permit, failure to make a hazardous waste determination, and failure to immediately amend a contingency plan. Civil penalties were assessed for each violation in the sum of \$367,078.00.

Response(s):

RL letter 99-EAP-031, dated November 9, 1998, submitted supplemental information to the EPA in support of the multi-media inspection. The information consisted of supporting data regarding waste designation.

Meeting on February 19, 1999, - RL and contractor representatives meet informally with the EPA. The discussions were preliminary in nature and did not result in a settlement.

RL letter 99-OCC-0118, dated March 17, 1999, provided a formal response to the Complaint and included a request for hearing. In addition, the response identified defenses for each of the three counts and made a request for dismissal.

An administrative law judge has been appointed and a pre-hearing order has been issued. The pre-hearing discovery phase is to be completed by June 22, 1999. This requires that all documents used in the defense must be identified and available and a witness list will have to be prepared, which includes a brief summary on the witness testimony. In addition, a draft settlement is being prepared that will include potential supplemental environmental projects (SEP). Meetings are being held that started on Tuesday, April 27th, to start the pre-hearing effort.

EPA letter OEC-164, dated March 9, 2000, - transmitted the finalized EPA MMI inspection report to RL. The report contains reviews of RCRA, National Pollutant Discharge Elimination System, Toxic Substances Control Act of 1976, polychlorinated biphenyl, Clean Air Act (CAA), Emergency Planning and Community Right to Know Act, National Emission Standards for Hazardous Air Pollutants/Asbestos, and Underground Storage Tanks. The EPA is not planning any formal enforcement activities for the above portions of the inspection with the exception of RCRA.

A prehearing was held in September 1999. During the prehearing, the EPA withdrew Count III, failure to have a contingency plan, with prejudice, from the complaint. A court date has been set for June 2000 and the hearing will be held in Richland, Washington.

EPA letter ORC-158, dated October 12, 2000 - documents the terms of the settlement of the Multimedia Inspection matter in a Consent Agreement and Final Order (CAFO). The CAFO requires payment of a civil penalty, performance of two SEPs, and the performance of specified compliance activities.

Ecology letter, dated June 13, 2002, provides Ecology's acceptance of the closure of the 200 East Area Pipe Laydown Yard Accumulation Area, and considers the requirements of the CAFO (RCRA-10-99-0106) Paragraph 23, Compliance Activities fulfilled.

Received Date: January 7, 1999

Agency: State of Washington Department of Ecology

Summary:

Ecology has formally denied the Application for Relief from Penalty (98NM-007) submitted on October 3, 1997. Ecology issued Penalty #97NM-248 on September 16, 1997, in the amount of \$110,000. The penalty was assessed as the result of the failure to properly manage chemicals and for the inadequate response to the subsequent chemical release from the Plutonium Reclamation Facility.

Response(s):

An appeal was filed with the PCHB with a pre-hearing originally scheduled for March 24, 1999. Ecology has requested the pre-hearing meeting be moved to April 2, 1999. The appeal completes the action associated with this item.

Settlement Agreement, dated July 7, 1999, - The Attorney General of Washington offered RL, Fluor Daniel Hanford, Inc. (FDH), and Babcock and Wilcox Hanford Company to enter into a Settlement Agreement resolving the NOP 97NM-248 issued by Ecology September 16, 1997. The proposed Settlement Agreement stipulates duration of agreement, innovative settlement payment, enforcement during the term of agreement, and dispute resolution. PCHB approval was obtained on July 7, 1999, making the Settlement Agreement effective.

Received Date: October 23, 1998

Agency: Attorney General

Summary:

The Attorney General of Ecology have agreed to stay of Administrative Order No. 98NW-009 issued on September 24, 1998, and addresses compliance with Federal and State hazardous waste regulations for the management of mixed waste in tanks. The stay is effective until January 29, 1999, and has been issued to aid in the process of settlement of the issues in the appeal of that order to be filed by the Appellants to the PCHB.

Response(s):

Settlement Agreement No. PCHB 98-249 and 98-250, dated February 26, 1999, - A settlement agreement was reached between Ecology, RL, FDH, and Lockheed Martin Hanford Corporation (LMHC) on February 26, 1999. The agreement suspended Administrative Order 98NW-009, pending signature of the agreement by the PCHB. Signature by the PCHB and Administrative Appeals Judge was secured on March 15, 1999.

Ecology letter, dated October 6, 2000, closes out Ecology's March 24, 1998, inspection of the SY Tank Farm.

Ecology letter, dated April 6, 2001, provides Ecology's acceptance of the DST Emergency Pumping Guide that was submitted on March 6, 2001. Ecology considers all actions associated with the July 8, 1998, Notice of Correction closed.

Received Date: September 24, 1998

Agency: State of Washington Department of Ecology

Summary:

Ecology formally denied the Application for Relief from Penalty 98NW-007 issued to DOE, FDH, and LMHC on July 23, 1998. Penalty 98NW-007 was levied following the issuance of a NOC in response to a compliance inspection at the SY Tank Farm on March 24, 1998. The Application for Relief was received by Ecology on August 7, 1998. A review of the application revealed no new or extraordinary information relevant to dismissing the penalty.

Response(s):

October 23, 1998; The denial for Application for Relief from Penalty 98NW-007 was appealed by RL to the PCHB. November 4, 1998, meeting; RL, FDH, and LMHC proposed a reasonable settlement of the Penalty to Ecology. Ecology responded to indicate a counter proposal would be forthcoming.

Settlement Agreement, dated February 26, 1999, - A settlement agreement was reached between Ecology, RL, FDH, and LMHC on February 26, 1999. The agreement suspended Administrative Order 98NW-009, pending signature of the agreement by the PCHB. Signature by the PCHB and Administrative Appeals Judge was secured on March 15, 1999.

Ecology letter, dated October 6, 2000, closes out Ecology's March 24, 1998, inspection of the SY Tank Farm.

Ecology letter, dated April 6, 2001, provides Ecology's acceptance of the DST Emergency Pumping Guide that was submitted on March 6, 2001. Ecology considers all actions associated with the July 8, 1998, NOC closed.

Received Date: September 24, 1998

Agency: State of Washington Department of Ecology

Summary:

Ecology issued Administrative Order No. 98NW-009 on September 24, 1998. The Administrative Order requires DOE, FDH, and LMHC to comply with Chapter 70.105 RCW, Chapter 173-303 WAC, by reference Chapter 40, Code of Federal Regulations, and certain actions described as they apply to the management of waste at SY Tank Farm.

Response(s):

State of Washington, Attorney General issued a stay to Administrative Order 98NW-009 on October 23, 1998, following an appeal of that order by RL to the PCHB the same day. The stay remains in effect until January 29, 1999. The stay was issued to aid the process of settlement of the issues in the appeal of that order to be filed by the Appellants to the PCHB.

This item has been closed per Settlement Agreement No. PCHB 98-249 and 98-250. The Settlement Agreement was reached between Ecology, RL, FDH, and LMHC on February 26, 1999. The agreement suspended Administrative Order 98NW-009, pending signature of the agreement by the PCHB. Signature by the PCHB and Administrative Appeals Judge was secured on March 15, 1999.

Ecology letter, dated October 6, 2000, closes out Ecology's March 24, 1998, inspection of the SY Tank Farm.

Ecology letter, dated April 6, 2001, provides Ecology's acceptance of the DST Emergency Pumping Guide that was submitted on March 6, 2001. Ecology considers all actions associated

with the July 8, 1998, NOC closed.

Received Date: July 23, 1998

Agency: State of Washington Department of Ecology

Summary:

Ecology assessed a penalty (98NW-007) against the RL, FDH, and LMHC in the amount of \$75,600 under the provisions of the RCW 70.105.080. RL, FDH, and LMHC failed to provide a leak detection system for DSTs SY-101, 102, and 103 capable of detecting a leak from the primary or secondary structure of these tanks within 24 hours.

Response(s):

98-EAP-425, dated August 6, 1998, RL submitted an Application for Relief from Penalty 98NW-007 in accordance with protocols identified in the original NOP.

September 24, 1998; Ecology received and reviewed the Application for Relief from Penalty and responded with a Notice of Denial of Application for Relief from Penalty. The denial was based on the view held by Ecology and no new or extraordinary information relevant to dismissing the penalty was provided in the application. The option to appeal the denial to the PCHB was provided to the petitioners.

October 23, 1998; The denial for Application for Relief from Penalty 98NW-007 was appealed by RL to the PCHB.

Settlement Agreement No. PCHB 98-249 and 98-250, dated February 26, 1999, - A settlement agreement was reached between Ecology, RL, FDH, and LMHC on February 26, 1999. The agreement in part, stipulated the resolution of penalty 98NW-007, pending signature of the agreement by the PCHB. Signature by the PCHB and Administrative Appalls Judge was secured on March 15, 1999.

Ecology letter, dated October 6, 2000, closes out Ecology's March 24, 1998, inspection of the SY Tank Farm.

Ecology letter, dated April 6, 2001, provides Ecology's acceptance of the DST Emergency Pumping Guide that was submitted on March 6, 2001. Ecology considers all actions associated with the July 8, 1998, NOC closed.

Received Date: July 10, 1998

Agency: Washington State Department of Health

Summary:

WDOH has issued a NOV and NOC for violations of radioactive air emissions regulations at the 296-A-42 emission unit. The violation involves the intentional bypass of required controls and

the lack of any notification made to WDOH. Two violations and three corrective measures issued as compliance orders have been identified.

Response(s):

98-EAP-465, dated August 21, 1998, submitted required documentation to address Compliance Order #1.

98-EAP-422, dated August 10, 1998, submitted required documentation to address Compliance Orders #2 and #3.

AIR 99-105, dated January 13, 1999, provided written closure of the NOV following a review of the information submitted by RL.

Received Date: June 8, 1998

Agency: State of Washington Department of Ecology

Summary:

Ecology provided a 60-day NOI to sue RL for failing to meet SST Interim Stabilization milestone due dates. RL has the option to settle with a consent decree or proceed to trial.

Response(s):

February 22, 1999, following negotiations between senior DOE and State of Washington officials, the threatened law suit regarding the M-41-22 and M-41-23 HFFACOs milestones was cancelled and the parties have entered into a Consent Decree. The Consent Decree was issued by the Attorney General's Office on February 22, 1999, and contains provisions for a renegotiated schedule regarding the interim stabilization of SSTs.

Consent Decree closes this action.

Interim stabilization of the remaining SSTs will be renegotiated through the HFFACO.

Received Date: May 13, 1998

Agency: Washington State Department of Health

Summary:

WDOH found RL in violation of radioactive air emissions regulations in the operation of the Plasma Arc Furnace in the 324 Building. WDOH has issued a NOV and a NOC. RL conducted a project to treat neutron generators in the furnace during the week of April 13, 1998. RL shut down the stack tritium sampler for the duration of the project. RL did not submit a request for approval of periodic confirmatory monitoring to verify low emissions.

Response(s):

WDOH letter AIR 98-706, dated July 10, 1998, provided an extension to corrective action #1 based on a meeting held June 29, 1998, during which an extension agreement was reached. Evaluation of all NOCs is now due August 25, 1998.

98-EAP-441, dated August 20, 1998, RL submitted the required report in accordance with Compliance Order, #3. The report will be reviewed by WDOH to determine if revisions are needed for other Hanford Site NOCs. Due dates for any such revisions will be negotiated between RL and WDOH at that time.

Routine Technical Assistance Meeting, held on November 17, 1998, provided data to WDOH regarding 324 and 327 Building tritium measurements. WDOH was notified of the intent to discontinue tritium sampling associated with closure of the plasma arc furnace. Approval from WDOH was sought for this discontinuation. Closure of the furnace also eliminated the need for a NOC modification prior to further operation.

Communications Summary, dated January 19, 1999, summarized communications with WDOH personnel regarding a schedule for revising NOC discrepancies in accordance with the compliance order contained in the original NOV/NOC for the 324 Building.

99-EAP-260, dated April 20, 1999, submitted NOC updates to the EPA in response to the WDOH issued NOV/NOC. The updates were the result of a schedule developed by RL and WDOH to identify any discrepancies and resubmit applicable NOCs. The updated NOCs approved by WDOH were submitted for approval by the EPA.

99-EAP-261, dated April 27, 1999, submitted NOC updates to the EPA in response to the WDOH issued NOV/NOC. The updates were prepared in accordance with the Compliance Order issued as a part of the NOV/NOC and a schedule negotiated with WDOH. The updated NOCs were submitted for records purposes only.

AIR 99-609, dated June 9, 1999, provided formal closure of the NOV and Audit #555125 from WDOH.

Received Date: February 25, 1998

Agency: U.S. Environmental Protection Agency

Summary:

On February 25, 1998, the EPA issued a NOV to RL for violating the requirements defined in the ERDF Record of Decision. Three violations of the CAA and RCRA regulatory drivers were identified.

Response(s):

RL Letter 056862, dated March 20, 1998, submitted the required response to the corrective actions identified.

No response has been received from the EPA to date.

Received Date: November 13, 1997

Agency: State of Washington Department of Ecology

Summary:

Ecology issued Revised NOP Incurred and Due No. 97NM-139 on November 13, 1997. The NOP assesses a penalty against DOE in the amount of \$90,000 under the provisions of the RCW 70.105.080. This Revised NOP was assessed for the alleged failure to maintain control of waste accumulated in the 222-S Laboratory Complex per WAC 173-303-200(2), satellite accumulation.

Response(s):

RL letter, dated December 12, 1997, transmitted a Notice of Appeal to the PCHB for the revised NOP.

The Stipulation and Agreed Order of Dismissal, PCHB 97-189, dated June 1, 2001, was issued to resolve the dispute over the Revised NOP Incurred and Due No. 97NM-139.

Received Date: September 16, 1997

Agency: State of Washington Department of Ecology

Summary:

In 1997, a chemical mixture stored for over a year in a tank located in the Plutonium Reclamation Facility underwent a spontaneous reaction rapidly generating sufficient pressure to violently rupture the tank. After concluding its investigation of the incident, Ecology served RL a NOP and NOC demanding payment of the sum of \$110,000 for, inter alia, alleged violation of regulations prohibiting improper storage of hazardous waste. Corrective measures (CM) described at the end of the NOC letter were developed after the meetings regarding on-going actions being performed by DOE and its contractors.

Response(s):

In January 1998, Ecology performed a compliance inspection at the Plutonium Finishing Plant. It is DOE's understanding that Ecology intends to incorporate further discussion regarding the disposition of the items subject to CM 6 into closure actions to be taken following issuance of the Ecology compliance inspection report. While DOE has been waiting issuance of Ecology's compliance inspection report, DOE pursued field activities to disposition the remaining items. No report has been received concerning this Ecology inspection

On February 2, 1998, DOE transmitted a letter to Ecology identifying the remaining CMs and requested an extension date of July 1, 1998. On March 16, 1998, DOE sent a letter to Ecology supplying a status related to the disposition of the items identified in CM 4. This letter also transmitted the emergency preparedness documentation being submitted for the closure of CMs 1

and 2 for Ecology's review and comment.

On April 15, 1998, DOE submitted final documentation to close out CMs 1 and 2 that will become effective on July 1, 1998.

DOE responded to the NOP by filing with Ecology an Application for Relief from Penalty, which Ecology denied on January 7, 1999. DOE has 30 days from January 7, 1999, to appeal to the PCHB.

Ecology letter, dated August 8, 2000, - Ecology concurs that the six corrective measures have been met and DOE and its contractors completed measures required to settle penalty #97NM-248. Ecology considers these matters closed.

Received Date: April 30, 1997

Agency: State of Washington Department of Ecology

Summary:

Ecology issued NOP Incurred and Due No. 97NM-139 on April 28, 1997. The NOP assesses a penalty against DOE in the amount of \$90,000 under the provisions of the RCW 70.105.080. This NOP was assessed for the alleged failure to maintain control of waste accumulated in the 222-S Laboratory Complex per WAC 173-303-200(2), satellite accumulation.

Response(s):

RL letter, dated May 13, 1997, provided the DOE, FDH, and Rust Federal Services of Hanford Inc. (RFSH) Application for Relief from Penalty 97NM-139.

Ecology letter, dated May 15, 1997, acknowledged Ecology's receipt of the Application for Relief from Penalty 97NM-139. In this letter, Ecology offered to meet with DOE, FDH, and RFSH prior to issuing a formal response to the Application for Relief.

Ecology letter, dated July 2, 1997, offered prospective dates to meet with DOE, FDH, and RFSH prior to issuing a formal response to the Application for Relief.

Ecology letter, dated July 15, 1997, identified that a written addendum to the Application for Relief will be required for Ecology to consider additional information relating to the DOE, FDH, and RFSH Application for Relief from Penalty 97NM-139.

Ecology letter, dated November 13, 1997, issued Revised NOP Incurred and Due No. 97NM-139 in the amount of \$90,000 for alleged violations of WAC 173-303-200(2).

Received Date: July 24, 1996

Agency: State of Washington Department of Ecology

Summary:

Ecology performed an inspection of the 306-E Facility to follow up an Ecology inspection that occurred on September 14, 1995. One of the issues that Ecology had at that time concerned material being stored in two cabinets that contained what Ecology said appeared to be incompatible chemicals that could pose a threat to human health and the environment. Ecology issued a VCL on July 24, 1996, for storage of incompatible waste.

Ecology issued a formal NOP to DOE and Westinghouse Hanford Company (WHC) that included a \$20,000 fine concerning storage of incompatible waste.

Response(s):

A formal response letter and payment of penalty was sent from WHC to Ecology on October 21, 1996. This enforcement action is considered closed.

On August 1, 1997, Ecology transmitted a letter of closure for the 306-E Facility stating that the corrective measures have been satisfied.

Received Date: March 6, 1996

Agency: State of Washington Department of Ecology

Summary:

Ecology issued a NOV (DE 96NM-033) to DOE alleging violation of WAC 173-400-141, -110, and -115 dealing with Prevention of significant deterioration (PSD) permitting, new source review, and new source performance standards under Washington's Clean Air Act. The NOV was issued on March 6, 1996. Ecology alleges that DOE is in violation of WAC 173-400-141 for failure to apply for and obtain the required state PSD permit and then operate the 300 Area boiler package without the permit, and in violation of WAC 173-400-115 for failure to meet new source performance standards for SO₂ emission limits from the boiler. Construction of the 300 Area package boiler commenced in September 1989. Ecology determined that construction of the boiler constituted a major modification of the source subject to the PSD permit requirements. Additionally, the boiler has burned No. 6 fuel oil, and Ecology estimates that the SO₂ emission rates exceed the NSPS's SO₂ emission limits.

Response(s):

On August 12, 1996, Ecology transmitted their Agreed to Order to close this NOV. The Order proposes to close the NOV without fines or penalties if followed by DOE.

Received Date: February 8, 1996

Agency: Washington State Department of Health

Summary:

WDOH issued a NOV to RL after two field inspectors were denied access to portions of B Plant Complex emission units. WAC 246-247-100 requires facilities to "ensure all emission units are fully accessible to Department inspectors." The NOV required RL to resolve the denial of access problems.

Response(s):

On March 1, 1996, RL transmitted an interim response to WDOH. The response documented a meeting conducted between RL and WDOH representatives on February 27, 1996, during which an extended due date of 30 days was agreed to. On April 8, 1996, RL transmitted a final response to WDOH that addressed the requirements of the compliance order.

On April 23, 1996, WDOH responded to the April 8, 1996, submittal from RL. WDOH provided comments to the documentation submitted by RL and requested the comments be addressed before the issue could be closed. RL responded to the comments provided by WDOH and a verbal agreement was reached closing the violation.

Received Date: January 19, 1996

Agency: State of Washington Department of Ecology

Summary:

Ecology issued an NOP Incurred and Due (No. DE 96-NW-001) to DOE and BHI. The penalty was assessed based on a violation revealed from an investigation into dangerous waste management activities at the 183-H basins closure project. A \$5,000 fine was assessed against DOE and BHI.

Response(s):

The penalty was paid and the NOP is considered closed.

Received Date: May 30, 1995

Agency: State of Washington Department of Ecology

Summary:

On May 30, 1995, Ecology issued a NOP Incurred and Due (No. DE 95NW-127) to DOE and Pacific Northwest National Laboratory after a pressurized drum that was improperly opened damaged the facility, caused worker contamination, and released radioactive material.

Response(s):

On August 7, 1995, Ecology transmitted a letter to DOE closing this action. This item was